Remarks

In the office action mailed February 22, 2007, claims 1, 3 and 5 - 7 are rejected under 35 U.S.C. §102(e) over U.S. Patent No. 5,218,471 (to Swanson et al.), claims 2, 8, and 10 – 12 are rejected under 35 U.S.C. §103(a) over Swanson et al. in view of U.S. Patent Application Publication No. 2005/0032378 (to Yu et al.), and claim 4 is rejected under §103(a) over Swanson et al. in view of U.S. Patent No. 5,900,637 (to Smith). Claims 13 – 20 are allowed.

The Swanson et al. reference discloses a process for forming Fresnel zone plates that employs the use of successive masks and ion etching. As stated in the prior response, the use of the successive masks in the Swanson et al. reference permits different areas of a substrate to have different depths. The office action mailed on February 22, 2007 asserts that this process of using successive mask and repeated ion etching meets the limitation of claim 1 of conducting lithography on the substrate at a first location using a first lithographic technique and a first set of exposure characteristics to form a first resist area, and conducting lithography on the substrate at a second location using the first lithographic technique and a second set of exposure characteristics to form a second resist area having a thickness that is different than a thickness of the first resist area. While applicants do not agree with this characterization of the Swanson et al. reference, claim 1 is amended herein to states that each of the lithography steps involves *maskless* lithography. The Swanson et al. reference includes not teaching suggestion or motivation for providing a method as claimed in claim 1 as amended herein.

Claim 1, therefore, is submitted to be in condition for allowance. Each of claims 2 - 9 depends directly from claim 1, and is also submitted to be in condition for allowance.

Independent claim 10 is also amended herein to state that the method claimed therein includes the step of providing a first pattern via *maskless* lithography. The Yu et al. reference discloses a nano-machining method that is disclosed to achieve a high aspect ratio by irradiating the substrate with an energetic charged particle beam prior to conducting lithography with a patterned mask. The Yu et al. reference includes no disclosure of conducting the lithography on a substrate using hydrogen silsesquioxane, and the Yu et al. reference includes no disclosure of conducting maskless lithography. Neither the Swanson et al. reference nor the Yu et al. reference discloses the use of hydrogen silsesquioxanem or the use of maskless lithography. There can be, therefore, no suggestion or motivation to combine these references to achieve the method as claimed in claim 10 as amended herein.

Claim 10, therefore, is submitted to be in condition for allowance. Each of claims 11 and 12 depend from claim 10 and further limit the subject matter thereof. Each of claims 10 - 12, therefore, is submitted to be in condition for allowance.

Each of claims 1 - 20 is submitted to be in condition for allowance. Favorable action consistent with the above is respectfully requested.

Respectfully submitted,

William E. Hilton
Registration No. 35,192
Gauthier & Connors LLP
225 Franklin Street, Suite 2300
Boston, Massachusetts 02110
Telephone: (617) 426-9180, Ext. 111